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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,292	02/15/2002	Yukihiro Saida	SAT 173	8990

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1101 14TH STREET, NW  
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WASHINGTON, DC 20005

EXAMINER

PHAN, RAYMOND NGAN

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 06/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/075,292

Applicant(s)

SAIDA, YUKIHIRO

Examiner

Raymond Phan

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 5, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                        |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____.                                                |

### **Part III DETAILED ACTION**

#### ***Notice to Applicant(s)***

1. This application has been examined. Claims 1-16 are pending.
2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Claim Rejections - 35 USC § 112***

4. Claims 11-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 11 and 14, metes and bounds can not be determined and cause the claims to be vague and indefinite.

As per claims 11, 14, the phrase, "...transmit a plurality of split data obtained by splitting data to be sent...", is vague. What/how is the plurality of data obtained by splitting data to be sent?

As per claims 11, 14, the phrase, "...transmit split data out of the split data...", is vague.

The remaining claims, not specifically mentioned, are rejected for

incorporating the defects from the parent claim by dependency

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 11-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hori (JP No. 10-228355).

In regard to claims 1, 11-16, Hiro discloses a data transmitting and receiving system comprising: a data transmitting device (i.e. host TX) (see figure 5); a data receiving device (i.e. peripheral equipment RX) being connected to said data transmitting device (see figure 5); and wherein data is transmitted and received between said data transmitting device and said data receiving device and wherein said data transmitting device is provided with a first transmitting section (i.e. isochronous transfer) used to periodically and sequentially transmit a plurality of data obtained by data to be transmitted, to said data receiving device and with a second transmitting section (i.e. interrupt transfer) used to transmit said data, when said data receiving device was unable to receive said data sent from said first transmitting section (i.e. loss or incomplete), to said data receiving device, during a period of time between transmitting time bands in which said first transmitting section transmits said data (see abstract).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4, 6-7, 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hori in view of Ejiri (US No. 6,434,643).

In regard to claim 2, Hori discloses wherein said first transmitting section transfers said data in accordance with isochronous transfer specifications designated by Universal Serial Bus (USB) standards (see abstract). But Hori does not disclose second transmitting section transmits said data that said data receiving device was unable to receive, in accordance with bulk transfer specifications designated by said USB standards. However Ejiri discloses the multiple types of transfers including interrupt and bulk transfers (see col. 8, lines 8-40). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

In regard to claim 3, Ejiri discloses wherein said first transmitting section, after having transmitted said data to said data receiving device in accordance with interrupt transfer specifications designated by said USB standards, prior to said first transmitting section's transmission of data existing subsequent to data, makes an inquiry of said data receiving device as to whether said data receiving device was able to receive said data transmitted by said first transmitting section (see col. 6, line 59 through col. 7, line 63). Therefore, it would have been obvious to a

person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

In regard to claim 4, Ejiri discloses wherein said data receiving device, in response to said inquiry from said first transmitting section as to whether said data receiving device was able to receive said data transmitted by said first transmitting section in said data transmitting device in accordance with interrupt transfer specifications, notifies said first transmitting section as to whether said data receiving device was able to receive said data, in accordance with said interrupt transfer specifications (see col. 6, line 59 through col. 7, line 63). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

In regard to claim 6, Ejiri discloses wherein said second transmitting section, when said first transmitting section has received a notification that said data receiving device was unable to receive said data, transmits, in accordance with said bulk transfer specifications, said split data that said data receiving device was unable to receive, to said data receiving device (see col. 8, line 8 through col. 9, line 22). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

In regard to claim 7, Ejiri discloses wherein said second transmitting section transmits said split data that said data receiving device was unable to receive, in the

order in which said first transmitting section transmitted said split data (see col. 8, lines 8-40). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

In regard to claim 10, Ejiri discloses wherein said data receiving device is a printing system and wherein said first transmitting section and second transmitting section transmit split data produced by splitting printing data to be printed by said printing system in a form of said split data (see col. 8, lines 8-40). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Ejiri within the system of Hori because it would assure sufficient bandwidth capacity and a fast data transfer rate.

### ***Allowable Subject Matter***

9. Claims 5, 8-9, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 5, 8-9, are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach wherein said data transmitting device stores information about location of split data to be stored that said data receiving device was unable to receive (claim 5); wherein said second transmitting section, when said data receiving device was unable to receive split data transmitted by said second transmitting section in

Art Unit: 2111

accordance with said bulk transfer specifications, re-transmits said split data that said data receiving device was unable to receive, in accordance with said bulk transfer specifications (claim 8); wherein said data receiving device stores information about location of split data to be stored that said data receiving device was unable to receive (claim 9).

***Conclusion***

10. Claims 1-4, 6-7, 10-16 are rejected. Claims 5, 8-9 are objected.
11. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

**Howard et al. (US No. 6,067,591)** disclose a method and apparatus for avoidance of invalid transactions in a bus host controller.

**Wang et al. (US No. 6,742,076)** disclose an USB host controller for systems employing batched data transfers.

**Garney (US No. 6,119,190)** discloses a method to reduce system bus load due to USB bandwidth reclamation.

**Lim et al. (US No. 5,996,031)** disclose a system and method for the real time switching of an isochronous data stream.

**Shakkarwar (US No. 5,933,611)** discloses a dynamic scheduler for time multiplexed serial bus.

**Wooten (US No. 5,832,492)** discloses a method of scheduling interrupts to the linked lists of transfer descriptors scheduled at intervals on a serial bus.

**Christison et al. (EP No. 1102171)** disclose an USB network peripheral device.



Art Unit: 2111

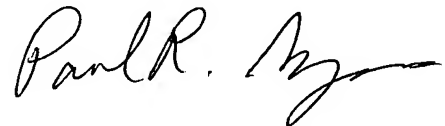
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (703) 306-2756. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (703) 305-9656 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.



PAUL R. MYERS  
PRIMARY EXAMINER



**Raymond Phan**  
6/22/04